Naval Command,
Control and Ocean
Surveillance Center
RDT&E Division

San Diego, CA
92152–5001


# Lifecycle Management of Hazardous Materials/ Hazardous Waste

# NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER RDT&E DIVISION
## San Diego, California 92152–5001

**H. A. WILLIAMS, CAPT, USN**
**Commanding Officer**

**R. C. KOLB**
**Executive Director**


## ADMINISTRATIVE INFORMATION

This document was prepared by the NRaD Hazardous Materials/ Hazardous Waste Lifecycle Management Process Action Team.

Released by
R. Monroe, Head
Environmental Support

Under authority of
D. L. Davison, Manager
Safety and Environmental Office

# CONTENTS



## Figures



## Tables

## INTRODUCTION

This document, which applies to all military, civilian, and contractor personnel, establishes the guidelines for lifecycle management (LCM) of hazardous materials/hazardous waste. Recognizing the unique and fragile ecosystem that exists within the Point Loma Naval Complex, and the Navy's role as steward of the environment for current and future generations, Naval Command, Control and Ocean Surveillance Center (NCCOSC) RDT&E Division (NRaD) policy supports full compliance with federal, state, local, and Navy rules, regulations, and policies (references 1–13).

## WHAT YOU NEED TO KNOW ABOUT HAZARDOUS MATERIALS

Hazardous material (HM) is any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a present or potential hazard to human health and safety or to the environment.

**How Do I Know If Something Is Hazardous?** The first place to look is on the container of the substance. There are many different types of labels, but if a chemical is hazardous, the label will usually tell you. So play it safe. Get in the habit of reading the labels on all containers—and follow all instructions. If you have any questions, ask your supervisor or refer to the Material Safety Data Sheet (MSDS).

**Label.** All HM must be labeled with the following information: chemical name (in English); chemical hazards; date received (or created, if an in-house material or solution); and name of owner/code. The manufacturer's original label usually contains most of the required information. All original and secondary containers must be properly labeled.

**Common Name.** The common name is any designation or identification, such as trade name, brand name, or generic name used to identify a chemical other than by its chemical name.

**Authorized Use List (AUL).** The AUL is a list of HM approved by the Safety and Environmental Office (Code D038) for use. The user/requester must verify that the requested HM is on their code's AUL (reference 7). If not, check with Code D038 for assistance.

**Substitution.** To minimize the generation of HW, every attempt shall be made to identify and use nonhazardous or less hazardous material.

**Standard Operating Procedure (SOP).** SOPs are written health and safety guidelines for HM use, handling, storage, and spill cleanup. They are required for all carcinogens and reproductive toxins listed in the California Code of Regulations (reference 4). User codes must submit a copy of the SOP to Code D0383 for approval prior to acquisition or use of such material. Following approval, the SOP must be posted in all areas where the material is stored or used.

**Inventory.** Following NRaD's Inventory Format guidelines, an itemized listing of HM, chemical substances, or components known or suspected to contain HM must be made for each code's current store of HM. The inventory must include, but not be limited to, responsible users (including contractors), HM locations, HM nomenclature, manufacturer, stock numbers, and quantities.

**Storage.** Adequate and proper storage must be available prior to receiving HM. This is necessary to avoid fire, explosion, generation of toxic fumes, or other hazardous reactions. Reference 13 provides compatibility guidance.

**Ozone Depleting Substance (ODS).** An ODS is a chlorine- or bromine-containing molecule (usually, but not always, a chlorofluorocarbon) having a high ozone-depleting potential that travels to the stratosphere where it dissociates. The resulting chlorine (or bromine) radical reacts to destroy surrounding

ozone molecules. Production of all Class I ODSs (table 1) ceased as of 3l December 1995. Purchases of ODSs (either the pure chemical or a constituent of a mixed product) require Senior Executive Official approval (reference 12). Requesters should actively seek substitutes.

**Material Safety Data Sheet (MSDS).** The MSDS contains information on the chemical and physical properties of the material, health and physical hazards of the material, and emergency and first aid information. When ordering any HM, the purchase order must request that an MSDS be provided by the supplier. The MSDS must be on file at the site where any HM is used or stored and be readily accessible to all employees during their workshift. MSDSs must be maintained for all HM in the workplace and reviewed prior to working with HM.

**Protective Equipment.** Personal protective equipment and administrative/engineering controls must be considered when handling HM.

**Physical Hazard.** Any material that can cause fire, explosion, violent chemical reactions, or other similar hazardous situations is considered a physical hazard.

**Health Hazard.** Any material that can cause illness or injury when a person is exposed either by ingestion, skin or eye contact, skin absorption, or inhalation is considered a health hazard.

## PURCHASING HAZARDOUS MATERIALS

**Inventory Procedures.** The acquisition phase is detailed below and outlined in the Acquisition Flowchart (figure 1). Prior to purchasing HM, consider the following points:

*(a) Inventory Minimization (references 5–12).* HM minimization reduces costs and liabilities. To avoid excess inventories and excess generation of HW, and to limit the potential for large

spills, only the minimum quantities of HM required for a project should be ordered. For ongoing projects (6 months or longer), no more than a 3-month supply should be ordered at a given time. The user code is responsible for adding the HM to its inventory.

*(b) Existing Inventory.* To avoid duplication of stock, the user/requester shall check the requesting code's existing inventory before ordering HM. Code D038 will screen HM requests against NRaD's Master Inventory. If the material is available in another code, the requester will be notified.

**Material Acquisition.** The three methods for acquiring HM are ServMart direct purchase, purchase request for supplies, and HM acquired pursuant to contractual requirements. All HM acquisitions, regardless of method (excluding credit card, which is not allowed) require completion of an HM Pre-Purchase Checklist (figure 2).

Note that certain HM packaging requires special treatment once the HM has been used; for example, the State of California considers all used batteries to be Hazardous Waste (HW); therefore, all new batteries are to be treated as HM. Another example is compressed gas (i.e., greater than 40 psi at 70°F). Requisitions for compressed gas should also address the return or disposal of the expended/unwanted cylinders. Such cylinders cannot be disposed of through the Public Works Center (PWC).

**ServMart Requisition.** The user/requester shall submit a completed HM Pre-Purchase Checklist, via their Environmental Coordinator, for forwarding to Code D0383 within 5 working days after purchase. For HM obtained from ServMart, the NRaD Library, as well as Code D038, can assist in retrieving the required MSDSs from the DoD Hazardous Material Information System (HMIS).

**Purchase Request.** All purchase requests (NRaD 4270/1) shall have an HM Pre-Purchase Checklist attached before routing to Code D038 for internal approval. The Checklist shall be

completed by the user and signed by the code's Environmental Coordinator before submitting the request to the supervisor for signature. Code D0383 will retain the checklist. HM requests submitted via the Electronic Paperwork System (EPS) shall have a copy of the checklist faxed to Code D038 (ext. 3–6756) at the same time the request is electronically routed to Code D038. Purchase requests (paper or EPS) will not be approved without a signed copy of the HM Pre-Purchase Checklist.

**Contract Requirements.** Where HM will be used on NRaD property, the Contracting Officer shall include the "Occupational Safety and Health Requirements" clause in the contract and require the contractor to give notice of an HM requirement to the Contracting Officer's Representative (COR). The contractor will normally retain ownership of any HM used and will obtain, use, and dispose of any HM/HW pursuant to all applicable laws, regulations, and instructions.

Where HM must be retained by the government, the contractor shall notify the COR of such a requirement. Upon notice, the COR shall execute an HM Pre-Purchase Checklist. The COR is responsible for ensuring that the HM acquisition meets the checklist requirements and for submitting the checklist to Code D038 via the code's Environmental Coordinator. If the HM is in the code's inventory, the HM may be provided to the contractor as government-furnished equipment (GFE). If HM is acquired from the contractor, the COR is responsible for entry of that acquired HM into the code's inventory and the Spill Contingency Plan (SCP).

**Receipt/Acceptance.** When HM is received, the condition of the material should be noted. Leaking, damaged, or open containers shall be rejected and the supplier and requester notified. HM should not be accepted, unless an MSDS accompanies the material or the code already has the appropriate MSDS on site.

**Supply Purchased Items.** The Supply Department shall be responsible for obtaining MSDSs for open market purchases of HM in accordance with references 1 and 2. The NRaD Library, as well as Code D038, can assist in retrieving MSDSs for HM purchased through the National Stock System.

## SPILLS

**Spills and the Spill Contingency Plan (SCP).** All HM used or stored by a code must be included in that code's SCP prior to acquisition. An SCP is a written response plan incorporating the following: general layout of the location, building floor plans, evacuation routes, HM/HW inventory, spill response equipment list, immediate emergency action plan, and training requirements. The supervisor is responsible for ensuring that the code has a written SCP and that the employees are trained in the details of the plan. If a large spill should occur (as defined by the SCP), Code D038 must be notified immediately. If a spill or discharge is reportable to an outside agency, Code D038 will be responsible for such notification. Requests for emergency response should be directed to the Federal Fire Department, ext. 9–911. Requests for spill cleanup and supplies should be directed to the Safety and Environmental Office, ext. 3–5024.

## HAZARDOUS WASTE

Hazardous waste (HW) is any discarded, excess, or spilled material (solid, liquid, or gaseous) that meets the definition of HM. The State of California recognizes HW in one of two ways: (a) it either exhibits a characteristic of HW (ignitable, corrosive, reactive, or toxic), or (b) it is a listed HW. Lists of California HW can be found in reference 4.

HM no longer needed or no longer suitable for its intended purpose is considered HW unless the material can be recycled or reused by others. HW generators will make the initial determination. Specific questions may be directed to Code D038 if the generator is uncertain.

**Environmental Coordinators** (also known as HM/HW Coordinators). Environmental Coordinators, designated at the division or branch level, shall have a good working knowledge of NRaD's acquisition procedures; HM/HW transportation, labeling, tracking, storage, recycling, disposal, and training requirements; and their code's HM inventory, HM usage, HW generation, and the SCP. The Coordinator shall contact Code D0384, ext. 3–7464, when a HW pickup is required and provide a consolidated list of HW for disposal (figure 3).

Coordinators shall ensure that HW areas are inspected weekly (figure 4) and all appropriate signs are posted. Written records of such inspections and corrective actions taken are to be retained for at least 3 years. Coordinators shall retain copies of all County health permits, written Notices of Violation, and corrective action documentation.

Coordinators shall ensure that all HW is transferred to Code D0384 within appropriate time limits.

**Label.** All HW must be properly identified and labeled (upon generation). At the time of pickup, all paperwork (HW Disposal Request, HW Profile Sheet, MSDS) shall be checked for completeness. Containers will be checked for structural integrity and proper labeling with the Hazardous Waste Label (NRaD 5104/4). (See figure 5.)

## STORAGE AND DISPOSAL

**Containers.** HM or HW must be compatible with the container in which it is stored and with other material or waste in the container. The containers must be in good condition, kept closed, except when adding or removing waste, and have secondary containment. These containers shall not be stored in sinks or near storm or floor drains. The containers must be checked weekly for leaks, labeling, closure, etc.

**Storage of HW within the Code.** An HW Storage Area is to be maintained within each code until the HW is picked up by Code D0384. **Codes are not to transport HW.** Pickup will take place no more than 45 days from the initial accumulation start date or within 72 hours from the satellite accumulation quantity/time limit. All HW storage areas shall be inspected weekly.

**HW Generators.** HW generators must appropriately identify any HW they generate. The HW must be properly managed, including storage, markings, and containment. The users of HM are responsible for initiating the disposal procedures, including notifying (and receiving guidance from) their Environmental Coordinators, as soon as HW is identified.

**Unknown Waste.** Waste of unknown composition must be analyzed prior to disposal. Containers should be sampled and labeled: "Awaiting laboratory analysis." It is not a declared HW if the hazards are unknown. Code D0384 can assist in arranging for analysis.

**Satellite Accumulation Area (SAA).** SAA is ". . . the initial accumulation point which is at or near the area where the (hazardous) waste is generated and which is under the control of the operator of the process generating the waste. . ." (reference 4). With Code D0384 approval, HW may be accumulated up to 9 months from the satellite accumulation start date, **or** up to 55 gallons of HW, **or** 1 quart of **acutely, toxic,** or **extremely hazardous** waste may be accumulated, whichever occurs first. When the quantity or time limit has been reached, HW must be removed to Code D0384 within 72 hours, accompanied by an HWPS (figures 6 and 7) and the appropriate MSDS(s).

**HW Storage Facility.** The HW Storage Facility located at Building 145, Bayside, is maintained by Code D0384. HW is stored here less than 60 days from the initial accumulation start date. Inventories shall be performed and arrangements made with PWC for HW to be picked up on a weekly basis from the HW

Storage Facility. Compressed gas cylinders, explosives, medical/infectious waste, Otto fuel, and radioactive wastes are disposed of through an outside contractor. All HW must be removed from NRaD within 60 days of the accumulation start date.

**Ultimate Disposal.** Properly managed HW shall be sent to a certified HW Treatment, Storage, and Disposal Facility (TSDF). The waste either will be incinerated to decomposition or treated to make it less hazardous, and then buried in a regulated landfill. NRaD's liability for such waste extends indefinitely.

## TRANSPORTATION

**Regulations.** All HM/HW shall be transported in accordance with Department of Transportation regulations. No HM/HW shall be transported on public roads without proper placarding and licensing. Shipping/Receiving will deliver all new HM. **Transportation of HW within NRaD will be provided by Code D0384.** Codes are not to deliver HW to NRaD's HW Storage Facility. Disposal of all HW off NRaD (this includes both the PWC and contractual disposal) will be coordinated through Code D038.

## RESPONSIBILITIES

**Training.** The quantity and type of training required will be dependent on the employee's job function. Code D038 shall train supervisors and/or Environmental Coordinators. Supervisors are responsible for ensuring their employees are trained commensurate with their duties. Code D038 can assist in developing HM/HW training programs and annual refresher courses. Topics include awareness training, hazard communication, HM/HW management, spill response, and safety training. Copies of training records and job descriptions for employees whose duties include handling HM/HW must be available at the work site.

**HM Users.** HM users must develop SOPs for all HM in their inventory that require them. They must complete an HM Pre-Purchase Checklist prior to acquiring HM, properly manage all HM in their workspace, and review the appropriate MSDSs prior to working with HM.

**Environmental Coordinators.** Environmental Coordinators, designated at the division or branch level, are responsible for reviewing/signing the HM Pre-Purchase Checklist, maintaining current HM inventories, managing and arranging disposal of their code's HW via Code D0384, and maintaining disposal/ inspection records.

**Division Heads.** Division heads are responsible for ensuring all of their employees have accurate job descriptions and appropriate training. At a minimum, all employees who handle or store HM (and/or HW) shall receive Hazard Communication training and be trained in the division's SCP. All employees who generate or handle HW shall be trained in HW management. They shall designate Environmental Coordinators for their divisions by memorandum and provide a copy to Code D038.

**Safety and Environmental Manager.** The Safety and Environmental Manager shall oversee the HM/HW program and shall ensure that all supervisors and Environmental Coordinators are provided appropriate training.

**All Employees.** NRaD employees shall abide by all applicable HM/HW regulations.

**Contractors.** NRaD contractors shall abide by all applicable HM/HW regulations. This includes maintaining a current HM inventory accompanied by an MSDS for all HM on NRaD property.

# OZONE DEPLETING SUBSTANCES

**Table 1.** Class I Ozone Depleting Substances (ODS)

| Common Name | Chemical Name |
|---|---|
| CFC-11 (R-11) | Trichlorofluoromethane |
| CFC-12 (R-12) | Dichlorodifluoromethane |
| CFC-13 (R-13) | Chlorotrifluoromethane |
| CFC-111 (R-111) | Pentachlorofluoroethane |
| CFC-112 (R-112) | Tetrachlorodifluoroethane |
| CFC-113 (R-113) | Trichlorotrifluoroethane |
| CFC-114 (R-114) | Dichlorotetrafluoroethane |
| CFC-115 (R-115) | Chloropentafluoroethane |
| CFC-211 (R-211) | Heptachlorofluoropropane |
| CFC-212 (R-212) | Hexachlorodifluoropropane |
| CFC-213 (R-213) | Pentachlorotrifluoropropane |
| CFC-214 (R-214) | Tetrachlorotetrafluoropropane |
| CFC-215 (R-215) | Trichloropentafluoropropane |
| CFC-216 (R-216) | Dichlorohexafluoropropane |
| CFC-217 (R-217) | Chloroheptafluoropropane |
| CFC-500 (R-500) | Azeotropic mixture of CFC-12/HFC-152a (Dichlorodifluoromethane/ Difluoroethane) |
| CFC-502 (R-502) | Azeotropic mixture of CFC-115/HCFC-22 (Chloropentafluoroethane/ Chlorodifluoromethane) |
| CFC-503 (R-503) | Azeotropic mixture of CFC-13/HFC-23 (Chlorotrifluoromethane/ Trifluoromethane) |
| Halon 1202 | Dibromodifluoromethane |
| Halon 1211 | Bromochlorodifluoromethane |
| Halon 1301 | Bromotrifluoromethane |
| Halon 2402 | Dibromotetrafluoroethane |
| Methyl Chloroform | 1,1,1-Trichloroethane |
| Carbon Tetrachloride | Tetrachloromethane |

CFC-Chlorofluorocarbons (also referred to as Freons)

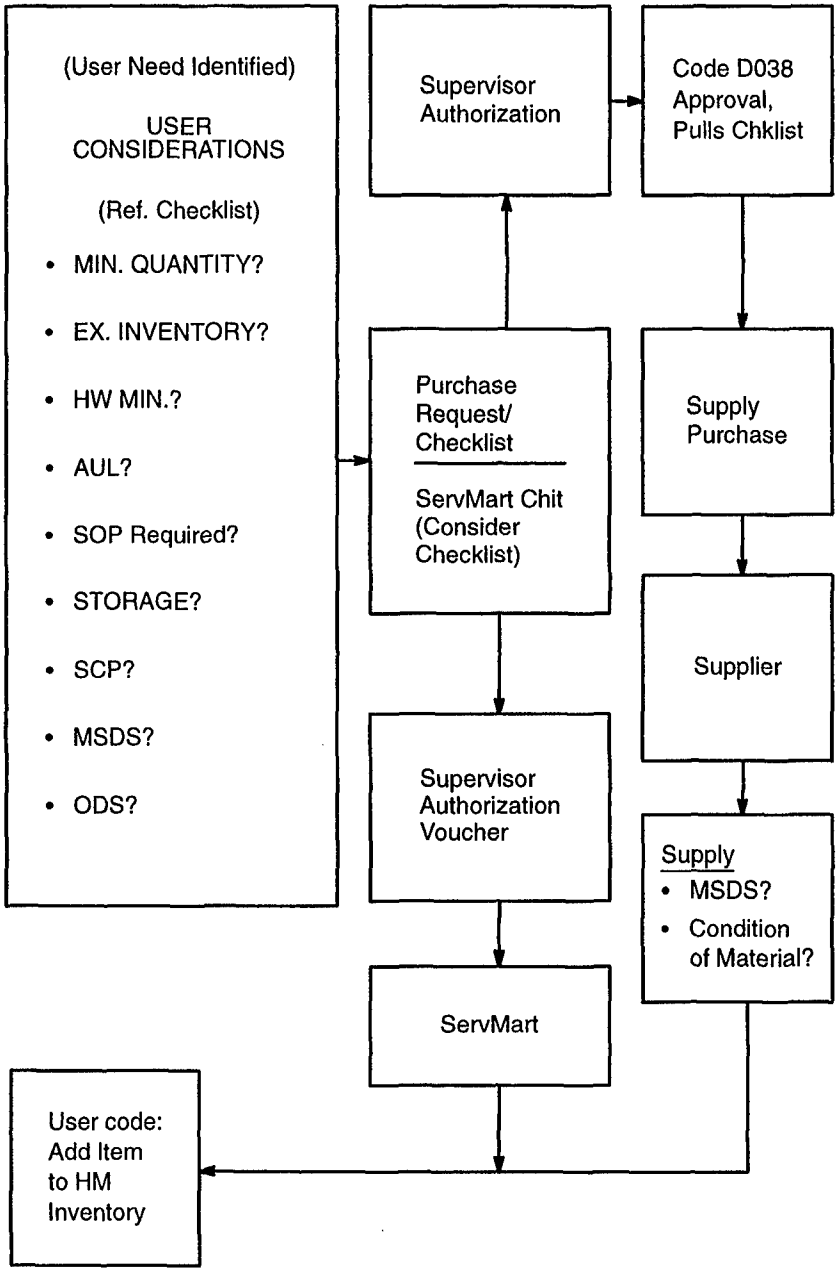



**Figure 1.** Acquisition Flowchart

## NRaD HAZARDOUS MATERIAL PRE-PURCHASE CHECKLIST

ATTACH COMPLETED FORM TO PURCHASE REQUEST AND FORWARD TO CODE D0383 FOR APPROVAL, OR FAX TO X36756.

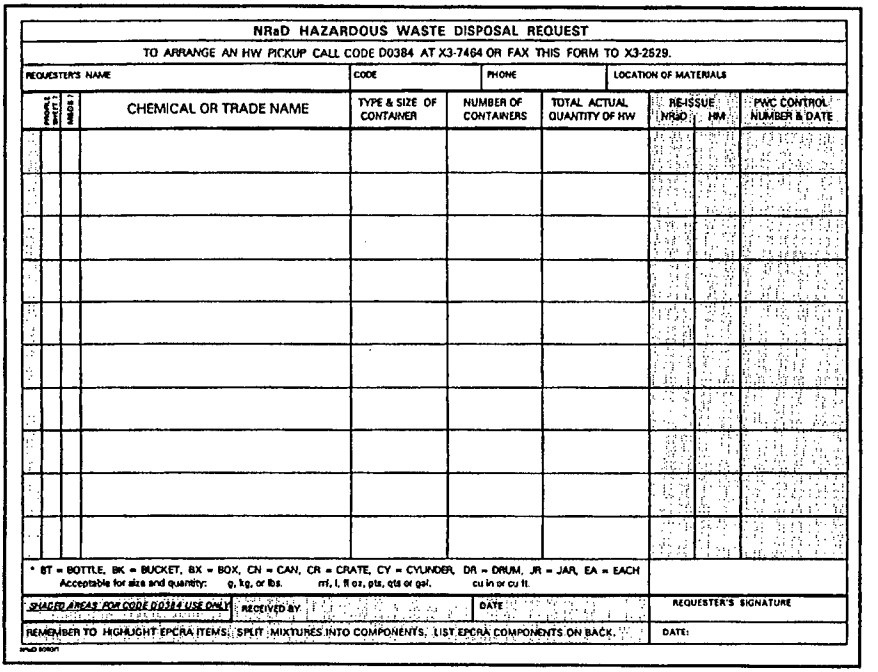
| Name of Material | Purchase Request Number | Date |
|---|---|---|
| Requester's Name | Code | Extension |

| Y | N | PLEASE ANSWER EACH ITEM BELOW: |
|---|---|---|
| | | 1. Is this the MINIMUM QUANTITY required? |
| | | 2. Has the Code's INVENTORY been checked? |
| | | 3. Has the RE-USE Facility, x35171, been checked? |
| | | 4. Are there any less hazardous/non-hazardous SUBSTITUTES? |
| | | 5. Is this hazardous material on your AUTHORIZED USE LIST?<br>If no, is this material on the Center's AUTHORIZED USE LIST? |
| | | 6. Is this material a carcinogen or reproductive toxin?<br>If yes, have you submitted a STANDARD OPERATING PROCEDURE to Code D0383? |
| | | 7. Do you have adequate and appropriate STORAGE for this hazardous material?<br>If yes, where? _____ |
| | | 8. Does the Purchase Request clearly state that a MATERIAL SAFETY DATA SHEET shall be provided by the supplier with the delivery of this hazardous material? |
| | | 9. List all the OZONE DEPLETING SUBSTANCES (by consituent) found in this product:<br>a. c.<br>b. d. |

HM/HW Coordinator's Signature: Date:

5090/2 (8/96)

**Figure 2.** NRaD Hazardous Material Pre-Purchase Checklist



NRaD HAZARDOUS WASTE DISPOSAL REQUEST

TO ARRANGE AN HW PICKUP CALL CODE D0384 AT X3-7464 OR FAX THIS FORM TO X3-2529.

REQUESTER'S NAME | CODE | PHONE | LOCATION OF MATERIALS

| PROPER SHIPPING NAME ? | HAZ CLASS ? | CHEMICAL OR TRADE NAME | TYPE & SIZE OF CONTAINER | NUMBER OF CONTAINERS | TOTAL ACTUAL QUANTITY OF HW | RE-ISSUE NRaD | RE-ISSUE HM | PWC CONTROL NUMBER & DATE |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

* BT = BOTTLE, BK = BUCKET, BX = BOX, CN = CAN, CR = CRATE, CY = CYLINDER, DR = DRUM, JR = JAR, EA = EACH
Acceptable for size and quantity: g, kg, or lbs. ml, l, fl oz, pts, qts or gal. cu in or cu ft.

SHADED AREAS FOR CODE D0384 USE ONLY | RECEIVED BY: | DATE | REQUESTER'S SIGNATURE

REMEMBER TO HIGHLIGHT EPCRA ITEMS. SPLIT MIXTURES INTO COMPONENTS, LIST EPCRA COMPONENTS ON BACK. | DATE:

NRaD 5090/1

**Figure 3.** NRaD Hazardous Waste Disposal Request

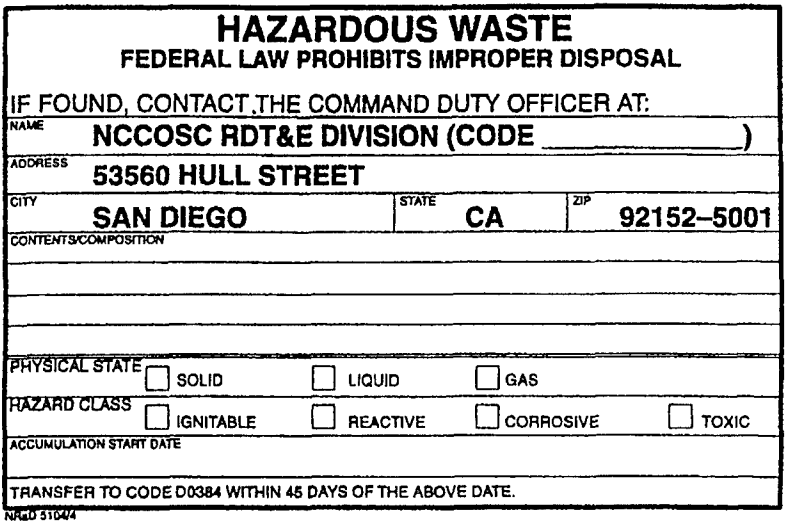
Bldg. ___ Hazardous Waste Storage Area (SD Co. HMMD Permit: H80___) Weekly Inspection Checklist
(CCR 66265.15, 66265.174, 40 CFR 265.15, 265.174)

| | | Problems Discovered | Corrective Action Taken | Date Corrected |
|---|---|---|---|---|
| 1. Are all containers properly labeled? (CCR 66262.34, 40 CFR 262.34) | SAT UNSAT | | | |
| 2. Are all containers closed? (CCR 66265.173, 40 CFR 265.173) | SAT UNSAT | | | |
| 3. Are containers compatible with the hazardous waste stored in them? (CCR 66265.172, 40 CFR 265.172) | SAT UNSAT | | | |
| 4. Are all containers in good condition, i.e., not damaged or leaking? (CCR 66265.171, 40 CFR 265.171) | SAT UNSAT | | | |
| 5. Are incompatibles stored separately, i.e., not in the same container and not in the same tray? (CCR 66265.177, 40 CFR 265.177) | SAT UNSAT | | | |
| 6. Do all containers have secondary containment? (CCR 66265.177, 40 CFR 265.177) | SAT UNSAT | | | |
| 7. Are all containers moved to Code D0384 within 45 days? (CCR 66262.34, 40 CFR 262.34) | SAT UNSAT | | | |
| 8. Is there adequate aisle space? (CCR 66265.35, 40 CFR 265.35) | SAT UNSAT | | | |
| 9. Is there a working communication system available? (CCR 66265.32, 66265.34, 40 CFR 265.32, 265.34) | SAT UNSAT | | | |
| 10. Are a fire extinguisher, safety shower/eyewash, and spill kit available nearby? (CCR 66265.32, 40 CFR 265.32) | SAT UNSAT | | | |

Note: CCR refers to CCR Title 22 Division 4.5

Room No._____: Inspected by_____ on (date)_____ at (time)_____.

**Figure 4.** NRaD Hazardous Waste Storage Area Weekly Inspection Checklist



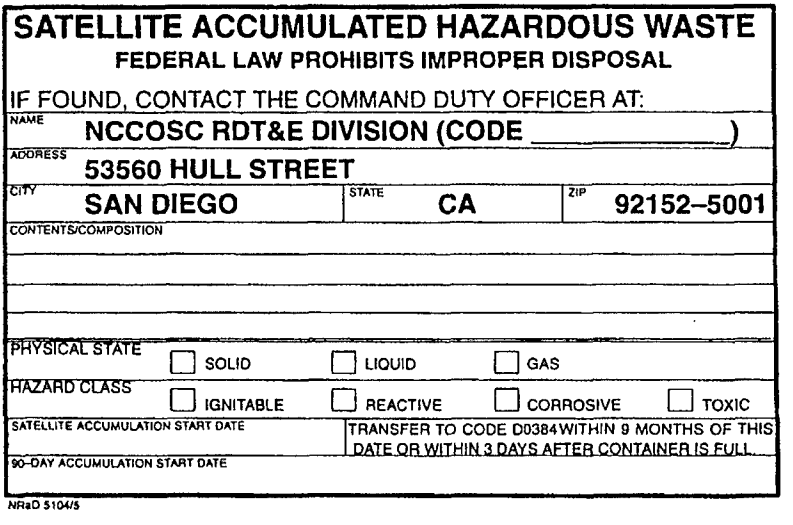
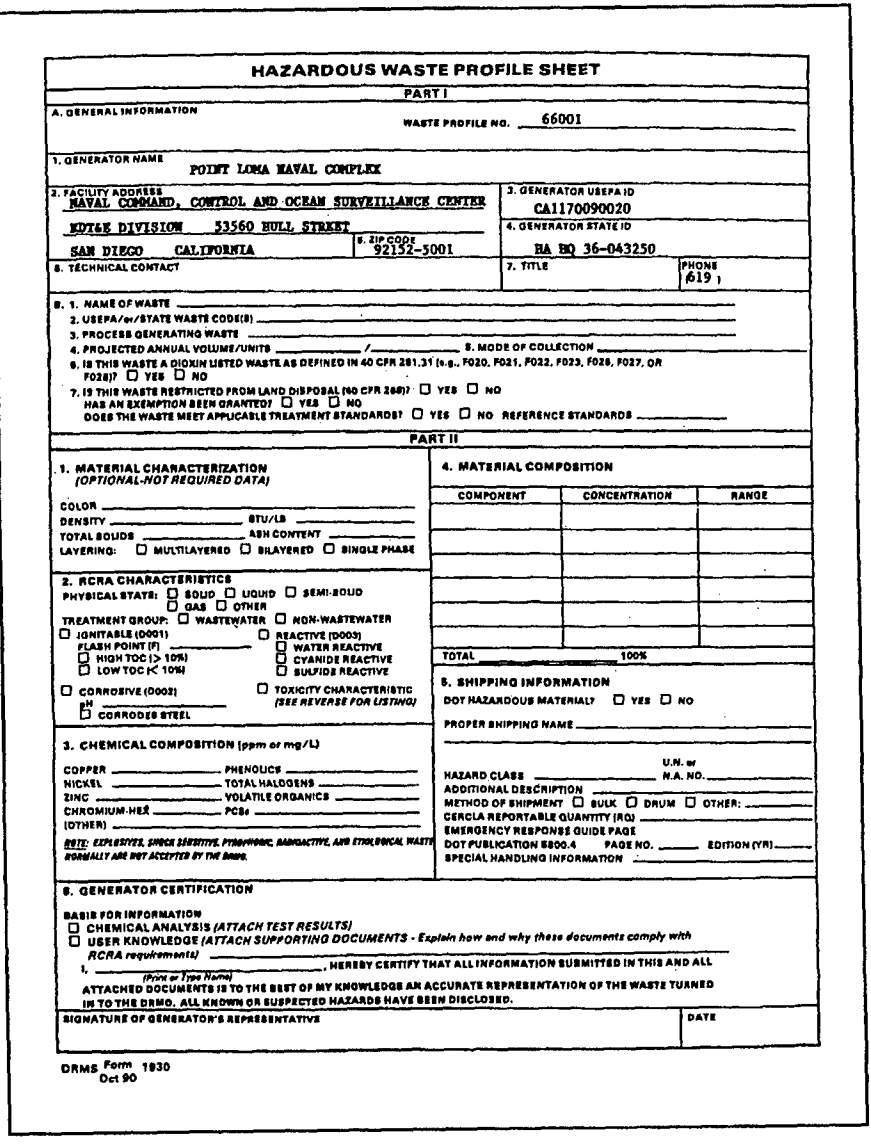




**Figure 5.** NRaD Hazardous Waste Labels



HAZARDOUS WASTE PROFILE SHEET

PART I

A. GENERAL INFORMATION

WASTE PROFILE NO. 66001

1. GENERATOR NAME: POINT LOMA NAVAL COMPLEX

2. FACILITY ADDRESS: NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
NOT&E DIVISION 53560 HULL STREET
SAN DIEGO CALIFORNIA
5. ZIP CODE 92152-5001

3. GENERATOR USEPA ID: CA1170090020

4. GENERATOR STATE ID: HA HQ 36-043250

6. TECHNICAL CONTACT

7. TITLE

PHONE (619 )

B. 1. NAME OF WASTE

2. USEPA/or/STATE WASTE CODE(S)

3. PROCESS GENERATING WASTE

4. PROJECTED ANNUAL VOLUME/UNITS / 5. MODE OF COLLECTION

6. IS THIS WASTE A DIOXIN LISTED WASTE AS DEFINED IN 40 CFR 261.31 (e.g., F020, F021, F022, F023, F026, F027, OR F028)? ☐ YES ☐ NO

7. IS THIS WASTE RESTRICTED FROM LAND DISPOSAL (40 CFR 268)? ☐ YES ☐ NO
HAS AN EXEMPTION BEEN GRANTED? ☐ YES ☐ NO
DOES THE WASTE MEET APPLICABLE TREATMENT STANDARDS? ☐ YES ☐ NO REFERENCE STANDARDS

PART II

1. MATERIAL CHARACTERIZATION *(OPTIONAL-NOT REQUIRED DATA)*

COLOR
DENSITY BTU/LB
TOTAL SOLIDS ASH CONTENT
LAYERING: ☐ MULTILAYERED ☐ BILAYERED ☐ SINGLE PHASE

2. RCRA CHARACTERISTICS

PHYSICAL STATE: ☐ SOLID ☐ LIQUID ☐ SEMI-SOLID ☐ GAS ☐ OTHER
TREATMENT GROUP: ☐ WASTEWATER ☐ NON-WASTEWATER
☐ IGNITABLE (D001) FLASH POINT (F)
☐ HIGH TOC (> 10%)
☐ LOW TOC (< 10%)
☐ REACTIVE (D003)
☐ WATER REACTIVE
☐ CYANIDE REACTIVE
☐ SULFIDE REACTIVE
☐ CORROSIVE (D002) pH
☐ CORRODES STEEL
☐ TOXICITY CHARACTERISTIC *(SEE REVERSE FOR LISTING)*

3. CHEMICAL COMPOSITION (ppm or mg/L)

COPPER PHENOLICS
NICKEL TOTAL HALOGENS
ZINC VOLATILE ORGANICS
CHROMIUM-HEX PCBs
(OTHER)

*NOTE: EXPLOSIVES, SHOCK SENSITIVE, PYROPHORIC, RADIOACTIVE, AND ETIOLOGICAL WASTE NORMALLY ARE NOT ACCEPTED BY THE DRMO.*

4. MATERIAL COMPOSITION

| COMPONENT | CONCENTRATION | RANGE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| TOTAL | 100% | |

5. SHIPPING INFORMATION

DOT HAZARDOUS MATERIAL? ☐ YES ☐ NO

PROPER SHIPPING NAME

HAZARD CLASS U.N. or N.A. NO.
ADDITIONAL DESCRIPTION
METHOD OF SHIPMENT ☐ BULK ☐ DRUM ☐ OTHER:
CERCLA REPORTABLE QUANTITY (RQ)
EMERGENCY RESPONSE GUIDE PAGE
DOT PUBLICATION 5800.4 PAGE NO. EDITION (YR)
SPECIAL HANDLING INFORMATION

6. GENERATOR CERTIFICATION

BASIS FOR INFORMATION
☐ CHEMICAL ANALYSIS *(ATTACH TEST RESULTS)*
☐ USER KNOWLEDGE *(ATTACH SUPPORTING DOCUMENTS - Explain how and why these documents comply with RCRA requirements)*

I, *(Print or Type Name)*, HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS TO THE BEST OF MY KNOWLEDGE AN ACCURATE REPRESENTATION OF THE WASTE TURNED IN TO THE DRMO. ALL KNOWN OR SUSPECTED HAZARDS HAVE BEEN DISCLOSED.

SIGNATURE OF GENERATOR'S REPRESENTATIVE | DATE

DRMS Form 1930 Oct 90

**Figure 6.** Hazardous Waste Profile Sheet (Parts I and II)

**TOXICITY CHARACTERISTIC LIST**

EFFECTIVE 25 SEP 90 - LARGE QUANTITY GENERATORS
29 MAR 91 - SMALL QUANTITY GENERATORS

| CONTAMINANT | EPA HW No. | (mg/L) | CONTAMINANT | EPA HW No. | (mg/L) |
|---|---|---|---|---|---|
| ☐ ARSENIC | D004 | | ☐ HEXACHLORO-1,3,-BUTADIENE | D033 | |
| ☐ BARIUM | D005 | | ☐ HEXACHLOROETHANE | D034 | |
| ☐ BENZENE | D018 | | ☐ LEAD | D008 | |
| ☐ CADMIUM | D006 | | ☐ LINDANE | D013 | |
| ☐ CARBON TETRACHLORIDE | D019 | | ☐ MERCURY | D009 | |
| ☐ CHLORDANE | D020 | | ☐ METHOXYCHLOR | D014 | |
| ☐ CHLOROBENZENE | D021 | | ☐ METHYL ETHYL KETONE | D035 | |
| ☐ CHLOROFORM | D022 | | ☐ NITROBENZENE | D036 | |
| ☐ CHROMIUM | D007 | | ☐ PENTACHLOROPHENOL | D037 | |
| ☐ O-CRESOL | D023 | | ☐ PYRIDINE | D038 | |
| ☐ M-CRESOL | D024 | | ☐ SELENIUM | D010 | |
| ☐ P-CRESOL | D025 | | ☐ SILVER | D011 | |
| ☐ CRESOL | D026 | | ☐ TETRACHLOROETHYLENE | D039 | |
| ☐ 2,4-D | D016 | | ☐ TOXOPHENE | D015 | |
| ☐ 1,4-DICHLOROBENZENE | D027 | | ☐ TRICHLOROETHYLENE | D040 | |
| ☐ 1,2-DICHLOROETHANE | D028 | | ☐ 2,4,5-TRICHLOROPHENOL | D041 | |
| ☐ 1,1-DICHLOROETHYLENE | D029 | | ☐ 2,4,6-TRICHLOROPHENOL | D042 | |
| ☐ 2,4-DINITROTOLUENE | D030 | | ☐ 2,4,5-TP (SILVEX) | D017 | |
| ☐ ENDRIN | D012 | | ☐ VINYL CHLORIDE | D043 | |
| ☐ HEPTACHLOR (AND ITS HYDROXIDE) | D031 | | | | |
| ☐ HEXACHLOROBENZENE | D032 | | | | |

**PART III**

**FOR DRMO USE ONLY**

**DRMO VERIFICATION**

1. DATE VERIFIED _____

2. RESULTS ☐ *ATTACHED*

pH _____ FLASH POINT _____ SPECIFIC GRAVITY _____ HALIDES (TOX) _____

REACTIVITY: WATER REACTIVITY _____ CYANIDES _____ SULFIDES _____

TCLP _____

_____

_____

_____

**Figure 7.** Hazardous Waste Profile Sheet (Part III)

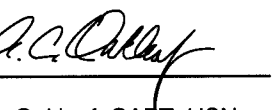
# ACRONYMS

| | |
|---|---|
| AUL | Authorized Use List |
| COR | Contracting Officer's Representative |
| EPS | Electronic Paperwork System |
| GFE | Government-Furnished Equipment |
| HM | Hazardous Material |
| HMIS | Hazardous Material Information System |
| HW | Hazardous Waste |
| HWPS | Hazardous Waste Profile Sheet |
| LCM | Lifecycle Management |
| MSDS | Material Safety Data Sheet |
| NSN | National Stock Number |
| ODS | Ozone Depleting Substance |
| PWC | Public Works Center |
| SAA | Satellite Accumulation Area |
| SCP | Spill Contingency Plan |
| SOP | Standard Operating Procedure |
| TSDF | Treatment, Storage, and Disposal Facility |

# REFERENCES


1. Federal Acquisition Regulations (FAR), Subpart 23
2. Defense Federal Acquisition Regulations Supplement (DFARS), Subpart 223
3. FED-STD-313C: Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities
4. California Code of Regulations (CCR), Title 22, Social Security
5. DoD 4160.21-M: Defense Reutilization and Marketing Manual
6. DoD Directive 4210.15: Hazardous Material Pollution Prevention
7. OPNAVINST 4110.2: Hazardous Material Control and Management
8. OPNAVINST 5090.1B: Environmental and Natural Resources Program Manual
9. OPNAVINST 5100.23D: Navy Occupational Safety and Health Program Manual
10. SPAWARINST 4110.1: Hazardous Materials Control and Management for the Space and Naval Warfare Systems Command Headquarters and Field Activities
11. NOSCINST 5100.5C: Occupational Safety and Health Manual
12. SPAWAR memo 5090 Ser 214/068 dated 14 June 1993
13. EPA-600/2-80-076: A Method for Determining the Compatibility of Hazardous Waste

Reviewed and approved by



A.C. Oakleaf, CAPT, USN
Executive Officer/Base
Operations Manager

TD 2647, Rev. 1
February 1997

Approved for public release;
distribution is unlimited.

*A Product of the Technical Information Division (TID)*
*URL: http://manta.nosc.mil/~skadberg/STI/STI.html*